

WHAT IS CLAIMED IS:

1. A magnetostatic wave device comprising a magnetic layer, having first and second end surfaces, made of a
5 magnetostatic wave material, wherein

a magnetostatic wave propagates between said first end surface and said second end surface in said magnetic layer, and

10 said second end surface has a first part having a first interval with respect to said first end surface and a second part having a second interval different from said first interval with respect to said first end surface.

2. The magnetostatic wave device according to claim 1,
15 wherein

said first part includes a first end surface part arranged in parallel with said first end surface at said first interval, and

20 said second part includes a second end surface part arranged in parallel with said first end surface at said second interval.

3. The magnetostatic wave device according to claim 1,
being a resonator resonating said magnetostatic wave between
25 said first and second end surfaces.

4. The magnetostatic wave device according to claim 1,
wherein

said magnetic layer includes first and second magnetic
5 layers arranged at a prescribed interval in a direction
intersecting with said first and second end surfaces.

5. The magnetostatic wave device according to claim 4,
further comprising an input line arranged on one of said first
10 and second magnetic layers and an output line arranged on the
other one of said first and second magnetic layers.

6. A magnetostatic wave device comprising a magnetic
layer, having first and second end surfaces, made of a
15 magnetostatic wave material in which a magnetostatic wave
propagates, wherein

said magnetic layer is separated into a plurality of
magnetic layers by at least one groove formed between said first
and second end surfaces, and said groove has a stepwise section
20 having at least one step.

7. The magnetostatic wave device according to claim 6,
wherein

the sectional shape of said groove is deepest at the
25 center of said groove and mirror-symmetrical.

8. The magnetostatic wave device according to claim 6,
wherein

said groove is formed by machining.

5

9. A magnetostatic wave device comprising:

a magnetic layer, made of a magnetostatic wave material
in which a magnetostatic wave propagates, receiving a dc
magnetic field applied along a prescribed direction; and
10 first and second ferromagnetic layers provided on both
ends of said magnetic layer in the direction of application
of said dc magnetic field.

10. The magnetostatic wave device according to claim 9,

15 wherein

said first and second ferromagnetic layers are formed
on the main surface of said magnetic layer.

11. The magnetostatic wave device according to claim 9,

20 wherein

opposite ends of said first and second ferromagnetic
layers are not parallel to each other.

12. The magnetostatic wave device according to claim 9,

25 wherein

said first and second ferromagnetic layers are made of
a hard magnetic material.

13. The magnetostatic wave device according to claim 9,
5 wherein

said magnetic layer has first and second end surfaces
parallel to each other, and

said magnetostatic wave device is a resonator resonating
a magnetostatic wave between said first and second end
10 surfaces.

14. The magnetostatic wave device according to claim 13,
wherein

said magnetic layer includes a plurality of magnetic
15 layers,

said plurality of magnetic layers are so arranged that
opposite first and second end surfaces of magnetic layers
adjacent to each other at a prescribed interval are parallel
to each other, and

20 said first and second ferromagnetic layers are provided
on each of said plurality of magnetic layers.

15. A magnetostatic wave device comprising:
a magnetic body made of a magnetostatic wave material
25 in which a magnetostatic wave propagates;

a dc magnetic field applier applying a dc magnetic field to said magnetic body; and

an auxiliary magnetic field applier applying an auxiliary magnetic field having adjustable field strength to
5 said magnetic body in addition to said dc magnetic field applied by said dc magnetic field applier.

16. The magnetostatic wave device according to claim 15,
wherein

10 said auxiliary magnetic field applier includes an electromagnet generating a magnetic field by feeding a current to a coil.

17. The magnetostatic wave device according to claim 15,
15 wherein

said auxiliary magnetic field applier includes an auxiliary magnetic field application film generating a magnetic field when fed with a current.

20 18. The magnetostatic wave device according to claim 17,
further comprising a substrate having said magnetic body arranged on its main surface, wherein

said auxiliary magnetic field application film and said magnetic body are arranged to hold said substrate therebetween.

19. A disturbance wave eliminator eliminating a disturbance wave from an input signal, comprising:

a magnetostatic wave device including a magnetic body made of a magnetostatic wave material in which a magnetostatic
5 wave propagates, a dc magnetic field applier applying a dc magnetic field to said magnetic body and an auxiliary magnetic field applier applying an auxiliary magnetic field having adjustable field strength to said magnetic body in addition to said dc magnetic field applied by said dc magnetic field
10 applier; and

a control unit controlling the strength of said auxiliary magnetic field generated from said auxiliary magnetic field applier of said magnetostatic wave device, wherein

said magnetostatic wave device is a magnetostatic wave
15 filter having a prescribed filtering band, and

said control unit includes:

a detector detecting change of said filtering band of
said magnetostatic wave filter, and

a current controller controlling the value of a current
20 supplied to said auxiliary magnetic field applier in response to said change of said filtering band detected by said detector.

20. The disturbance wave eliminator according to claim
19, wherein

25 said detector includes an insertion loss detector

detecting change of insertion loss of said magnetostatic wave filter.

21. The disturbance wave eliminator according to claim
5 20, wherein

said insertion loss detector detects change of insertion loss on an edge of said filtering band of said magnetostatic wave filter.

10 22. The disturbance wave eliminator according to claim
21, wherein

said insertion loss detector detects change of insertion loss on high- and low-frequency side edge portions of said filtering band of said magnetostatic wave filter.